



# **Kyl-Bingaman Update**

## ***Findings Regarding Commercial Availability of Non-U.S. Satellite Imagery with Respect to Israel***

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COLLECTION AND DISSEMINATION.—A department or agency of the United States may issue a license for the collection or dissemination by a non-Federal entity of satellite imagery with respect to Israel only if such imagery is no more detailed or precise than satellite imagery of Israel that is available from commercial sources.

Section 1064, Public Law No. 104-201, “1997 National Defense Authorization Act.”

- The Kyl-Bingaman Amendment restricts CRSRA licensees from disseminating satellite images of Israel at a Ground Sample Distance (GSD) better than what is available from foreign commercial sources
- The current Kyl-Bingaman resolution limit is 2 meters (m) GSD; this limit is instrument agnostic
- The 2 m limit has been in place since 1998 and was last reviewed by CRSRA in 2018

# Non-U.S., Sub-2 m Space-Based Assets

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- The Kyl-Bingaman Amendment was an effective control on the dissemination of satellite images of Israel as long as the majority of space-based remote sensing systems were under the jurisdiction of CRSRA
- Our study shows there are a number of foreign governments and private entities outside of CRSRA's jurisdiction that are producing and selling sub-2 m resolution satellite images
  - 12 commercial entities in 8 foreign countries operate sub-2 m space-based panchromatic (PAN) and/or multispectral (MSI) imagers; images from these systems are available for sale
  - 13 foreign nations operate dual-use, sub-2 m PAN/MSI imagers; of these, approximately half offer data from commercial sources
- CRSRA is aware that these numbers continue to increase
  - Over 20 commercial and dual-use sub-2 m PAN/MSI imaging satellites and constellations in a dozen nations are planned, in development, or awaiting launch

- CRSRA reviewed the ability to purchase sub-2 m images of Israel
  - directly from foreign operators,
  - from international resellers, and
  - from domestic resellers.\*

\*U.S. resellers of satellite images are not licensed by the U.S. Government and therefore are not subject to Kyl-Bingaman restrictions. Domestic resellers may partner with foreign satellite imagery providers and sell images of Israel without restriction.

- Review included
  - research on non-U.S. government restrictions on the resolution of satellite images that can be sold (in general or over Israel, specifically),\*\*
  - direct inquiries, and
  - independent image resolution analysis.

\*\*In keeping with the 2018 study, images from constellations under the jurisdiction of governments with resolution-based restrictions on the sale of satellite imagery are not considered “readily and consistently available.”

Source	Number Contacted	Sell Sub-2 m Images of Israel	Do not sell Sub-2 m Images of Israel	Unclear or No Response
Operators/Resellers	16	5	7	4

- Image analysis
  - 12 image samples were received
    - MSI (3)
    - PAN (3)
    - Pansharpened (6)
  - 2 independent resolution analyses performed on each image
  - Resolutions ranged from 4 m GSD (MSI product) to 0.4 m GSD (pansharpened product)
    - Deviation from advertised resolution ranged 0 – 9.8 cm
    - Average absolute deviation from advertised resolution is 5.8 cm

- Sub-2 m resolution satellite images of Israel are available for sale from a number of non-U.S. operators and foreign and domestic resellers
- Resolution analyses confirmed that the resolution of received electro-optical products agrees with advertised resolutions and may be better due to reseller resolution enhancements
- The best resolution of received products was 0.4 m GSD
- CRSRA finds that 0.4 m satellite image products are readily and consistently available over Israel and will change the Kyl-Bingaman threshold accordingly